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# Montana Pole and Treating Plant Superfund Site

## Butte, Montana

February 2001

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EPA United States Environmental Protection Agency

Montana Department of Environmental Quality

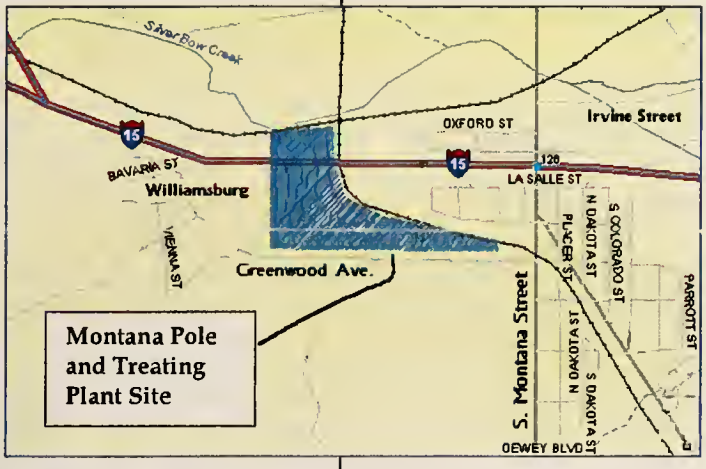
## Public Meeting

**When:** February 27, 2001 7:00 PM
**Where:** Boulevard Fire Hall
1900 S. Franklin Street, Butte, MT

## Site Background

The Montana Pole and Treating Plant Superfund site continues to be a successful remediation project for the U.S. Environmental Protection Agency (EPA) and the Montana Department of Environmental Quality (DEQ). EPA and DEQ, along with the site engineer, Camp Dresser & McKee Inc. and the site operator, Montana Bureau of Mines & Geology, are leading this project to success by using effective remediation solutions.

The Montana Pole and Treating Plant site is a former wood treating facility located in Butte, Montana. The plant used a solution of pentachlorophenol (PCP) mixed with a petroleum carrier oil, similar to diesel, to preserve poles, posts and bridge timbers. Contamination of soils, groundwater, and nearby Silver Bow Creek occurred from spillage of treating fluids and on-site disposal practices. As much as 370,000 gallons of light nonaqueous phase liquid (LNAPL) (floating oils) were estimated to be present on the water table.




For this project, the remedial investigation and feasibility study were conducted by a responsible party with oversight by EPA and DEQ. The Record of Decision was issued for the site in September 1993 by EPA and DEQ. Under the terms of a consent decree, entered by the U.S. District Court in 1996, certain parties responsible for the cleanup of the site settled their liability and provided approximately $35 million for EPA and DEQ to conduct the site cleanup. DEQ has subsequently conducted remedial design/remedial construction, operation of the water treatment plant, and operation and maintenance at the site. The water treatment plant has treated approximately 600 million gallons of contaminated water and has removed approximately two tons of PCP from the groundwater since the facility went into operation January 22, 1993.

## Phase 1

*Phase 1 Excavation*

*Phase 1 SSPs*

The primary activities completed during Phase 1 of the remedial action consisted of construction of the land treatment unit, building an addition to the water treatment plant, construction of two contaminated groundwater recovery trenches, and removal of the north-side contaminated soils. Phase 1 required detailed coordination of numerous remedy components including:

- Excavation of approximately 46,000 cubic yards of contaminated north-side soils and construction of aboveground biological treatment units. These units consist of 13 soil staging and pretreatment piles (SSPs) and a nine-acre biological land treatment unit. Air is added to the SSPs through a high volume vacuum system. Water and nutrients are also added through a drip irrigation system. The land treatment unit is tilled by conventional farming techniques and watered with a center pivot irrigation system. Nutrients can be applied while tilling or via liquid fertilization with the center pivot unit.

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- Bioremediation methods, which enhance the breakdown of contaminants by microorganisms through aeration and nutrient addition, were utilized for reclamation purposes. The SSPs and the land treatment unit both utilize soil bioremediation practices.
- Processing and placing approximately 10,000 cubic yards of previously excavated contaminated soils onto the SSPs along with approximately 16,000 cubic yards of north-side contaminated soils. The land treatment unit was loaded with 30,000 cubic yards of contaminated soils.

*Phase 1 WTP Addition*

- Removal and replacement of the active railroad track located adjacent to Silver Bow Creek in order to excavate contaminated soils below the tracks.
- LNAPL recovery and biological treatment of contaminated soils below the depth of excavation before backfilling.
- Construction of two recovery trenches. The Near Highway Recovery Trench is approximately 700 feet long and 22 feet deep. It was constructed just north of Interstate 15/90 and was designed to recover LNAPL and groundwater. The Near Creek Recovery Trench was constructed at the north end of the site, just south of Silver Bow Creek. This trench is designed to intercept all contaminated groundwater prior to leaving the site and is approximately 880 feet long and 20 feet deep.
- One component of the water treatment plant addition included the installation of a new oil/water separator to complement the existing activated carbon treatment system. The water treatment plant is used for above-ground treatment of extracted groundwater. The treated water is either used for watering the SSPs or is discharged to Silver Bow Creek.
- Treatment of contaminated oils and sludges in a licensed offsite hazardous waste incinerator.

*Phase 1 Land Treatment Unit*

- Installation of infiltration basins in the north side clean backfill to further enhance microbial degradation of groundwater and any residual soil contamination.

## Phase 2

Phase 2 of the remedial action consisted of the removal and disposal of hazardous and non-hazardous waste debris remaining on site. Off-site disposal methods included incineration and/or placement in hazardous and non-hazardous waste landfills. Metal debris was pressure washed and recycled. Phase 2 activities included the following:

- Characterization of the site debris to determine disposal requirements. Debris was segregated into non-contaminated debris that could be placed in a non-hazardous waste landfill, hazardous debris that could be placed in a licensed hazardous waste landfill, asbestos containing debris, metal that could be pressure washed and recycled, and solid and liquid wastes that required off-site incineration.

- Demolition of storage tanks. Sludges from the tanks were placed in drums and shipped to an incinerator. Tanks were cut up and pressure washed for off-site recycling.
- Asbestos containing materials were tested to determine whether they were friable. Non-friable asbestos-containing wastes were shipped to a licensed hazardous waste landfill and friable asbestos-containing wastes were double-bagged and disposed of at the same hazardous-waste landfill.

*Phase 2 After Debris Removal*

- Debris that could not be stabilized for hazardous-waste land disposal was incinerated off site along with the recovered sludges and oils.
- A temporary pressure wash pad was constructed for cleaning metal prior to recycling.
- Waste disposal volumes for Phase 2 activities included:
  - 1,036 cubic yards of uncontaminated debris disposed of in a non-hazardous waste landfill in Missoula, MT.
  - 3,224 tons of hazardous debris disposed of at an approved hazardous waste landfill in Idaho.
  - 300 tons of metals sent to a recycler.
  - 18 tons of hazardous sludges, solids, and oils treated at a licensed hazardous waste incinerator in Utah.

## Phase 3

Phase 3 of the remedial action consisted of the south-side contaminated soils excavation, off-loading Phase 1-treated soils from the land treatment unit, placing contaminated soil on the land treatment unit, installing the north and south *in situ* treatment systems, and the relocation of sewer and potable water lines. Phase 3 activities included the following:

- Excavation of approximately 148,000 cubic yards of contaminated soils and non-contaminated overburden from the south-side of the site and from accessible areas below the Interstate 15/90 bridges.
- Screening and loading approximately 132,000 cubic yards of contaminated soil on the land treatment unit for treatment of soils.

*Phase 3 LNAPL Recovery*

- Recovery of light non-aqueous phase liquids during all excavation activities. This was accomplished with the use of booms, a vacuum system and a rotating-drum skimmer. Approximately 20,700 gallons of LNAPL were collected during Phase 3.
- Construction of *in situ* cells at the north and south end of the site to enhance bioremediation of contaminated groundwater and non-accessible contaminated soils. A gravel layer and perforated piping were installed to inject nutrients and oxygenated water back into the groundwater to enhance the biodegradation of any residual contamination.
- Off-loading approximately 25,000 cubic yards of treated soils from the land treatment unit and backfilling these soils in the north side excavation.
- Placement of approximately 64,000 cubic yards of clean soils as backfill above the south-side *in situ* treatment systems.

*Phase 3 South Side Excavation*

- Off-loading 27,000 cubic yards of Phase 3 soils from the land treatment unit. After 3 months of treatment on the LTU, the top 28-inch lift of soils was remediated to below the treatment criteria for pentachlorophenol and polynuclear aromatic hydrocarbons and was backfilled in the south excavation area.
- Relocation of an existing community sewer line and construction of new sewer and potable water lines.

To date, more than 52,000 cubic yards of soil have been successfully treated in the land treatment unit. Treatment of the first 2 lifts of these soils were each obtained in one treatment season. Soil PCP concentrations in the heavily contaminated soils that were placed in the SSPs have been significantly reduced since being placed in the piles during Phase 1 activities.

## Phase 4

Phase 4 of this project will consist of off-loading the land treatment unit approximately over the next four years as surface soil lifts are remediated to below the action limits set for the site. These treated soils will be placed over the south-side *in situ* system. SSPs meeting the cleanup criteria will also be dismantled and the treated soils backfilled on-site.

## Phase 5

Phase 5 will address the contaminated soils beneath Interstate 15/90 that divides the site. Currently, a preliminary remedial alternatives report is being generated that evaluates various potential remediation methods including surfactant flushing, soil vapor extraction, hydraulic manipulation, and relocation of the interstate bridges and excavation of the contaminated soils beneath the existing bridges. Phase 5 construction activities are anticipated to begin in 2003.

## Phase 6

Phase 6 will consist of removal and disposal of the soil treatment facilities on the south side of the site and final revegetation of all disturbed areas. At that time, DEQ expects to turn the site over to Butte/Silver Bow City/County government. Final land use at the site will be determined by Butte/Silver Bow with certain constraints on land use specified by the Montana Pole and Treating Plant Record of Decision.

*Phase 5 Addresses Contaminants Below Highway*

For more information about the Montana Pole and Treating Plant Superfund Site, contact:


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Where to Review Site Documents:

Department of Environmental Quality
2209 Phoenix Avenue
Helena, Montana 59620-0901

U.S. EPA Montana Office
301 S. Park, Room 192
Helena, Montana 59626

Montana Tech Library
1300 W. Park Street
Butte, MT 59701-8997

Butte/Silver Bow Public Library
226 W. Broadway
Butte, MT 59701

## Public Meeting

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**Where:** Boulevard Fire Hall
1900 S. Franklin Street, Butte, MT

DEQ will make reasonable accommodations for persons with disabilities who wish to participate in this public meeting. Persons needing an accommodation must notify Laureen Kelly by February 26, 2001 in Helena at 1-800-246-8198 or 406-444-0822 to make arrangements.


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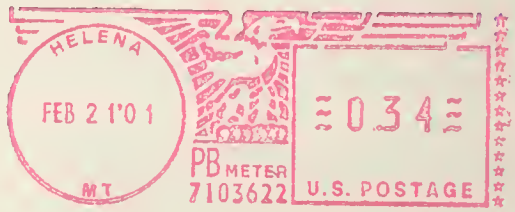


## Public Meeting Announcement

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